STCG Subcon Subgroup Meeting Minutes

June 6, 2000

Introductions/Announcements (Arlene Tortoso)

Arlene opened the meeting. Joe Cruz (new STCG Tank Subgroup Lead) stated that he was there to see how the Subcon Subgroup runs so he can structure the Tank Subgroup in a similar manner.

A conference call was scheduled for June 7 on the PITT testing for the Carbon Tetrachloride ITRD Project. There may be a workshop held in July.

We need to find out more information on the EMSP DNAPL workshop planned for August here at Hanford. Arlene suggested that perhaps we could do the ITRD and EMSP workshops back to back.

Dirk Dunning (Oregon Office of Energy) was not able to participate in the meeting. He sent a list of issues related to the movement of waste, which will be forwarded to the Subgroup mailing list. Some of these issues should be considered as potential new science needs. Scott Petersen will see if any of them link to existing science needs.

Review Minutes from Last Meeting (Facilitator)

The facilitator reviewed the minutes from the May 10, 2000 meeting, and no changes were requested.

Updates

Carbon Tetrachloride ITRD Project (Arlene Tortoso)

There was a Carbon Tetrachloride ITRD Project conference call on May 18 concerning the status of the PNNL modeling work. The model has been completed and is ready to run. The vadose zone PITT testing is relatively new, and someone raised issues about Duke's work. Duke was able to rebut the issues. Cost is the biggest issue. SNL allocated funds to Duke to do a more detailed 50% design cost estimate. Another conference call was scheduled for June 7.

Strontium-90 ITRD Project (Arlene Tortoso)

The Strontium-90 ITRD Project is at a standstill. Proposals for additional work on soil flushing are on hold. DOE and Ecology think we have enough information already. They want SNL to gather the information and produce a final report by the end of the fiscal year, looking at

scenarios for technology application. They should also look at movement of Sr-90 near the river. Mike Connely won't be able to start the modeling work until the December time frame. Bob Peterson and Ted Poston of PNNL recently completed a report on the impacts of Sr-90 on the ecosystems in the 100-N Area (*Strontium-90 at the Hanford Site and Its Ecological Implications*, PNNL-13127).

Permanent Badges for Subgroup Members (Arlene Tortoso)

Gordon Rogers would like a permanent visitor's badge if possible. Some HAB members have one and some don't. Is this an issue for other Subgroup members? Jim Hanson will work on this issue offline and get resolution.

Feedback from STCG Management Council Meeting (Gordon Rogers)

Gordon provided a summary of what happened at the May 25th STCG Management Council meeting. Harry Boston outlined the DOE-RL mission and his plans for quarterly Management Council meetings. The Subgroups are more important now that the Management Council is only meeting on a quarterly basis. The Management Council will support the Subgroups on policy issues. The Subgroup Leads will meet with Harry monthly. The Subgroups are adding representatives from the DOE-RL Planing & Integration Division. Harry also wants to get ORP involved in the STCG again. There is a lot of interest among STCG members in resurrecting the Hanford Technology Deployment Center (HTDC) concept. Dan Tano will be involved in the ad hoc committee that was formed to look into this. Bill Miller made a good presentation on the S&T Plan for the SNF Program. For further information, the Management Council meeting minutes are posted on the STCG web page, which is available on the Hanford home page (http://www.hanford.gov).

Jim Hanson mentioned that Harry wants a monthly summary of Management Council and Subgroup activities. These should be Executive Summaries rather than the full meeting minutes. Dennis Faulk suggested that we shouldn't make more work, and Harry should use the existing meeting minutes.

SCFA Technical Assistance Program (Wayne Martin)

Wayne presented an overview of several recent SCFA Technical Assistance Program activities. Five people from various labs discussed the tritium issue at Hanford via conference call. A phase 1 report has been written. There was a tritium detection of 2 million pico curies per liter near the 618-11 burial ground. Later they measured 8 million pico curies per liter at that location. The burial ground is the likely source. They were lucky to see the high concentrations in a well because tritium plumes are usually very narrow.

Another Technical Assistance Program activity is a characterization survey of underground pipes. Hanford is working on this one with Savannah River using a pipe crawler. This activity involves identifying methods to survey the inside of small-diameter pipes (2-6 inches) and

surrounding soil for evidence of contamination. During the course of remediation work at Hanford, many small-diameter pipes are excavated. Excavating these pipes is necessary unless it can be shown that they are free of contamination, and that the soil surrounding them is below cleanup limits. If the pipes are near the surface, they can be economically excavated and removed, but pipes below approximately 10 feet are costly to exhume. Many of these pipes only carried non-hazardous and non-radioactive liquids, but determination of their historical contents is difficult because records of the location and use of the pipes are often lacking or inaccurate. The analytical system coupled with the instrument must have the following capabilities:

- Detect ^{137}Cs to an activity less than 6.2 pCi/g, ^{60}Co to an activity less than 1.4 pCi/g, and ^{90}Sr to an activity less than 4.5 pCi/g in the pipe and surrounding soil.
- Be able to discern between contamination in the pipe and contamination in the surrounding soil to the above detection limits and equate measurements to a corresponding estimated contamination in the surrounding soil so that the measurement can be compared to the cleanup limit.

Another activity is Radiological Analysis of Course-Grained Soils. Sampling at liquid waste sites currently requires separation and analysis of fine-grained material from cobbles and boulders often encountered in Hanford's 100-Area soils. The cleanup limits that must be met are expressed on a mass basis, so analysis of the fine-grained material is not representative of course-grained soils at a waste site. Analyses of radionuclides and chemicals based on this sampling method yield values that, in most cases, are overly conservative (i.e., higher than truly representative values) because there is a significant fraction of large particle sizes in the matrix. The work involved with this request for assistance should quantitatively evaluate the bias imposed by the current sampling technique. Suggested improvements for implementing a new approach (e.g., rapid field determination of grain size distribution) would also be in the scope of this work. Any suggested improvements will need a sufficient technical basis to permit an informed assessment by State and Federal regulators.

Another activity concerns TCE in an aquifer at Pantex. About 10 people have been working on that one for the past three months. It is likely that the plume came from a nearby military facility up-gradient from the Pantex site. They are currently identifying remediation technologies. Wayne will ask Tyler Gilmore, the PNNL representative, to present a summary of this activity to the Subgroup.

Wayne stated that Secretary Richardson is pleased with the progress made by the SCFA Technical Assistance Program and he wants to expand it beyond SCFA. Dennis Faulk said that Wayne should make sure that the regulators and project managers are involved in any future Technical Assistance activities at Hanford so they know what's going on.

SCFA Strategic Plan (Jerry White)

Jerry noted that nothing has happened on the SCFA Strategic Plan due to the Pantex Technical Assistance activity described above and the LANL fire. SCFA knows that they need to update their Strategic Plan and focus it appropriately on solutions to site problems. Jerry will bring an

initial draft to this Subgroup when it's ready. An official draft will go to all the sites.

DOE's S&T Portfolio Review (Jerry White)

Five volumes have been produced, and one of them is on S&T for environmental cleanup (*Environmental Quality R&D Portfolio Gap Analysis)*. Jerry is working on it, along with the Strategic Laboratory Council (Steve Stein is involved). The document asks if there are gaps and if DOE is adequately funding S&T to support the cleanup program. For Subcon and Tanks, the answer is no. The document outline was distributed. They are currently putting together a first draft, and they hope to finish in July. Jerry will provide status reports at future meetings.

Status Report on Selected S&T Needs (Scott Petersen)

Scott discussed the status of the following S&T needs:

- RL-SS18 (priority 3) – Improved Detection and Segregation of TRU Waste (Debris)
- RL-SS20 (priority 2) – Improved Debris Handling.

Deployment of TRU detection and segregation technologies is not planned until after FY06. Technology Insertion Point TIP-0003 outlines the activities that will be implemented between now and the insertion point milestone. Technologies that offer significant improvement over current debris handling practices have not yet been identified.
Nancy Uziemblo said that we should document even our small successes. PNNL is developing a database of S&T information and will make it user-friendly. Examples of small successes should definitely be noted.

Schedule of Summer Hanford Activities of Interest to the Subcon Subgroup (Scott Petersen)

Scott distributed a draft list of activities (presentations, demonstrations, deployments, solicitations, and conferences) of interest to Subgroup members for the remainder of calendar year 2000. It was suggested that he add In Situ Gaseous Reduction demonstration activities, as well as the EMSP DNAPL workshop to be held at Hanford in August. Additional suggestions should be sent to Scott to add to the list.

Action Items

1. Find out more information about the EMSP DNAL workshop planned for August at Hanford (Mark Freshley).
2. Send Dirk Dunning's list of issues to the Subgroup distribution list (facilitator). Done.
3. Check to see if we can link to the GW/VZ listing of issues that is now available (Scott Petersen).

4. Call Bob Peterson or Ted Poston to get the title of their recent report on the impact of Sr-90 on the habitat and ecosystems in the 100-N Area (facilitator). Done.
5. Send a message to Bonnie Harris and Cliff Clark regarding permanent badges for HAB members (Jim Hanson).
6. Ask Tyler Gilmore to present a summary of the Pantex TCE activity to the Subgroup (Wayne Martin).

Attendees

Gary Ballew (PREC)
Bill Bonner (PNNL)
Craig Cameron (EPA)
Joe Cruz (DOE-ORP)
Linda Fassbender (PNNL)
Dennis Faulk (EPA)
Dib Goswami (Ecology)
Jim Hanson (DOE-RL)
Ron Jackson (BHI)
Wayne Martin (PNNL)
Scott Petersen (BHI/TA)
Gordon Rogers (HAB)
Dan Tano (DOE-RL)
Arlene Tortoso (DOE-RL)
Nancy Uziemblo (Ecology)
Jerry White (BHI)

Wrap-Up (Arlene Tortoso)

The next Subcon Subgroup meeting is scheduled for July 18 in Room 1B-40 of the Bechtel Building. Candidate agenda items include:

- ROI Model for Hanford and the DOE Complex (Jerry White)
- Subcon Issues Related to Movement of Waste (Dirk Dunning)
- Status Report on Selected S&T Needs (Scott Petersen)
- EMSP DNAPL Workshop in August at Hanford (Mark Freshley)
- Upcoming Carbon Tetrachloride ITRD Meeting (Arlene Tortoso)
- ER Tec 2000 Conference (Tom Ferns)
- Techcon Vendor Searches and Pre-Qualification (Pete Molton)